


Listing of Claims:

Claims 1-18 (cancelled).

19. (New): Method for controlling a vehicle, having a traction-slip control system (TCS), comprising the steps of:

detecting a diagonal axle twist; and
evaluating the diagonal axle twist as a regulating variable.

 20. (New): The method according to Claim 19 further comprising the steps of:

effecting at least a partial lock of a differential within the vehicle, upon detection of a diagonal axle twist.


21. (New): The method according to Claim 20 wherein the effecting step at least partially locks at least one of a center differential, a front differential and a rear differential.

22. (New): The method according to Claim 20 wherein the effecting step at least partially locks a differential by way of the traction control system.

23. (New): The method according to Claim 20 wherein the effecting step at least partially locks a differential by way of a differential lock.

24. (New): The method according to Claim 19 further comprising the steps of:

setting a medium brake pressure level at wheel brakes of controlled wheels with minimum traction slip upon detection of diagonal axle twist, the medium brake pressure corresponding to required traction; and maintaining the medium brake pressure level for a period of time.

 25. (New): The method according to Claim 19 further comprising the step of:
reducing a control threshold of the traction slip control system upon detection of a diagonal axle twist.


26. (New): The method according to Claim 19 wherein said evaluating step is performed only when vehicle speed falls below a specified vehicle speed limit value.

27. (New): The method according to Claim 26 wherein said speed limit value is within the range of 3 to 15 kilometers per hour.

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28. (New): A method for detecting a diagonal axle twist of a motor vehicle, said motor vehicle having an all-wheel drive system, a vehicle control system and a traction control system, comprising the step of comparing a characteristic of each of the individual, driven wheels, the characteristic being at least one of wheel slip, rotating behavior and changes in rotating behavior.

29. (New): The method according to Claim 28 wherein the rotating behavior includes the traction slip of the individual wheels, and further comprising the step of determining whether the traction slip is greater than a specified limit value.

30. (New): The method according to Claim 28 wherein the characteristics of at least two transversally opposite wheels are compared.

 31. (New): The method according to Claim 28 wherein the characteristics of at least two diagonally opposite wheels are compared.

32. (New): The method according to Claim 28 further comprising the step of:
determining the diagonal axle twist when certain traction-slip conditions are satisfied for a period of time.

33. (New): The method according to Claim 32 wherein the traction-slip conditions include the traction slip being greater than a specified limit value on only one wheel of a secondary axle.

34. (New): The method according to Claim 32 wherein the traction-slip conditions include the traction slip being greater than a specified limit value on both of two diagonally opposite wheels.

35. (New): The method according to Claim 32 wherein the traction-slip conditions include the traction slip being less than a specified limit value on a first

wheel of a primary axle, the first wheel lying opposite a second wheel on said first axle, such second wheel having greater than the traction-slip specified limit value.

36. (New): The method according to Claim 32 wherein the period of time is 0.3 to 1.5 seconds.

37. (New): The method according to Claim 32 wherein the period of time is 50 to 200 msec. when a diagonal axle twist was determined with the prior 15 seconds.

38. (New): The method according to Claim 33 wherein the specified limit value is within the range of 10 kilometers per hour to 40 kilometers per hour.

39. (New): The method according to Claim 33 wherein the specified limit value is considered to have been exceeded when a control procedure of the traction control system is activated at a wheel.

40. (New): A circuit arrangement for detecting a diagonal axle twist of a motor vehicle, said motor vehicle having an all-wheel drive system and a traction-slip control system, the arrangement comprising, a first detection circuit for detecting measured changes in the rotating behavior of a set of driven wheels.

41. (New): The circuit arrangement of Claim 40 wherein said first detection circuit comprises:

a first evaluation circuit for evaluating the lip of the wheels on a secondary axle;

a second and a third evaluation circuit for evaluating the slip of two diagonally opposite wheels;

a fourth evaluation circuit for evaluating the slip of the wheels on a primary axle;

an integrator; and

a signal generator.

42. (New): the circuit according to Claim 40 further comprising a second detection circuit capable of detecting the vehicle reference speed on the basis of measured values; a comparator on said first detection circuit where the comparator is capable of comparing the vehicle reference speed with a specified limit value; and a signal generated by the first detection circuit when the vehicle reference speed falls below the specified value.